

AMENDMENTS TO THE SPECIFICATION

At page 1 before the heading "Background of the Invention," please insert the following heading and paragraph:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application No. 60/468,251, filed May 7, 2003, and this application is a continuation-in-part of U.S. Application No. 10/651,227, filed August 29, 2003, which is a continuation of U.S. Application No. 10/605,924, filed August 29, 2003, which is a continuation of U.S. Application No. 10/310,914, filed December 6, 2002, and U.S. Application No. 10/605,924 is a continuation-in-part of U.S. Application No. 10/649,653, filed August 28, 2003, which is a continuation of U.S. Application No. 10/605,923, filed August 28, 2003, which is a continuation of U.S. Application No. 10/321,503, filed December 18, 2002, and U.S. Application No. 10/605,923 is a continuation-in-part of U.S. Application No. 10/604,926, filed August 27, 2003, which is a continuation of U.S. Application No. 10/345,201, filed January 16, 2003, and U.S. Application No. 10/604,926 is a continuation-in-part of U.S. Application No. 10/604,727, filed August 13, 2003, which is a continuation of U.S. Application No. 10/604,726, filed August 13, 2003, which is a continuation of U.S. Application No. 10/293,338, filed November 14, 2002.

Please replace paragraph [0050] with the following replacement paragraph:

FIG. 21A is an annotated sequence of EST72223 (**SEQ ID NO: 97960**) comprising known miRNA gene MIR98 (**SEQ ID NO: 97963**) and novel gene GAM25 (**SEQ ID NO: 97964**) both detected by the gene detection system of the present invention;

Please replace paragraph [0053] with the following replacement paragraph:

FIG. 22A is an annotated sequence of an EST7929020 (SEQ ID NO: 97961) comprising novel genes GAM24 (SEQ ID NO: 97965) and GAM26 (SEQ ID NO: 97966) detected by the gene detection system of the present invention;

Please replace paragraph [0056] with the following replacement paragraph:

FIG. 23A is an annotated sequence of an EST1388749 (SEQ ID NO: 97962) comprising novel gene GAM27 (SEQ ID NO: 97967) detected by the gene detection system of the present invention;

Please replace paragraph [0193] with the following replacement paragraph:

Reference is now made to FIG. 21A which is an annotated sequence of an EST comprising a novel gene detected by the gene detection system of the present invention. FIG. 21A shows the nucleotide sequence of a known human non-protein coding EST (Expressed Sequence Tag), identified as EST72223 (SEQ ID NO: 97960). It is appreciated that the sequence of this EST comprises sequences of one known miRNA gene, identified as MIR98 (SEQ ID NO: 97963), and of one novel GAM gene, referred to here as GAM25 (SEQ ID NO: 97964), detected by the bioinformatic gene detection system of the present invention, described hereinabove with reference to FIG. 9.

Please replace paragraph [0198] with the following replacement paragraph:

Transcript preparations: Transcripts were prepared of EST72223_(TIGR) and of MIR98 and predicted GAM4 within it, and of EST7929020_(IMAGE) and of predicted GAM3 within it. [1.1] Transcripts were prepared by m⁷G(5')ppp(5')G-capping reaction by using mMessage mMachine kit (Ambion) according to the manufacture's protocol. Briefly, PCR products amplified with specific primers contain T7 promoter at the 5" end and T3 promoter at the 3" end were prepared from each DNA. The purified PCT products were transcribed with T7 polymerase. Transcript products were 725nt (EST72223), 102nt (MIR98), 125nt (GAM4) and 70nt (GAM3) long. EST72223 was PCR amplified with T7-EST 72223 forward primer: 5"-TAATACGACTCACTATAGGCCCTTATTAGAGG

ATTCTGCT-3" (**SEQ ID NO: 97948**) and T3-EST72223 reverse primer: 5"-AA TTAACCCTCACTAAAGGTTTTTTTTTTCCTGAGACAGAGT-3" (**SEQ ID NO: 97949**). MIR98 was PCR amplified with EST72223 as a template with T7MIR98 forward primer: 5"-TAATACGACTCACTATAGGGTGAGGTAGT AAGTTGTATTGTT-3" (**SEQ ID NO: 97950**) and T3MIR98 reverse primer: 5"-AATTAACCCTCACTAAAGGGAAAGTAGTAAGTTGTATAGTT-3" (**SEQ ID NO: 97951**). GAM4 was PCR amplified using EST72223 as a template with GAM4 forward primer: 5"-GAGGCAGGAGAATTGCTTGA-3" (**SEQ ID NO: 97952**) and T3-EST72223 reverse primer: 5"-AATTAACCCTCACTAAA GGCCTGAGACAGAGTCTTGCTC-3" (**SEQ ID NO: 97953**). GAM3 was PCR amplified using EST7929020 as a template with T7-GAM3 forward primer: 5"-T AATACGACTCACTATAGGGTCAGAGTGAACAGGCAACC-3" (**SEQ ID NO: 97954**) and T3-GAM3 reverse primer: 5"-AATTAACCCTCACTAAAGGG TCAGATGAGTAGGTTGCGAA-3" (**SEQ ID NO: 97955**).

Please replace paragraph [0200] with the following replacement paragraph:

Target RNA cleavage assay: Digoxigen (DIG) labeled antisense transcripts ~~was~~ **were** prepared from purified PCR product of MIR98 by using a DIG RNA labeling kit with T3 polymerase (Roche Molecular Biochemicals) according to the **manufacturer's manufacturer's** protocol. PCR primers are detailed above. Labeled transcript was 102nt long. Digoxigen (DIG) labeled PCT was prepared for GAM4 by using a DIG PCR labeling kit (Roche Molecular Biochemicals) according to the **manufacturer's manufacturer's** protocol. PCR primers are detailed above. Labeled transcript was 145nt long. 3"-DIG-tailed oligo ssDNA antisense probes, containing DIG-dUTP and dATP at an average tail length of 50 nucleotides were prepared with DIG Oligonucleotide Kit (Roche Molecular Biochemicals) from 100pmole oligonucleotides. Labeled predicted "correct" GAM3 oligonucleotide is 5"-GAGTAGGTTGCGAAAATTTTCTCC-3" (**SEQ ID NO: 97956**) and labeled "incorrect" GAM3 oligonucleotide is 5"-C CCATTTTGTAGGTTGCCTGTTCA-3" (**SEQ ID NO: 97957**), and predicted "correct" GAM4 oligonucleotide is 5"-CTTCCTGGGTTCAAGCAATT-3" (**SEQ**

ID NO: 97958), while labeled “incorrect” GAM4 oligonucleotide is 5’-**TTTCTGAGACAGAGTCTTGCTCTG-3’** (**SEQ ID NO: 97959)**. Labeled oligo probes were 24nt long.

Please replace paragraph [0203] with the following replacement paragraph:

Reference is now made to FIG. 22A which is an annotated sequence of an EST comprising a novel gene detected by the gene detection system of the present invention. FIG. 22A shows the nucleotide sequence of a known human non-protein coding EST (Expressed Sequence Tag), identified as EST 7929020 (**SEQ ID NO: 97961)**. It is appreciated that the sequence of this EST comprises sequences of two novel GAM genes, referred to here as GAM24 (**SEQ ID NO: 97965)** and GAM26 (**SEQ ID NO: 97966)**, detected by the bioinformatic gene detection system of the present invention, described hereinabove with reference to FIG. 9.

Please replace paragraph [0206] with the following replacement paragraph:

Reference is now made to FIG. 23A which is an annotated sequence of an EST comprising a novel gene detected by the gene detection system of the present invention. FIG. 23A shows the nucleotide sequence of a known human non-protein coding EST (Expressed Sequence Tag), identified as EST 1388749 (**SEQ ID NO: 97962)**. It is appreciated that the sequence of this EST comprises sequence of a novel GAM gene, referred to here as GAM27 (**SEQ ID NO: 97967)**, detected by the bioinformatic gene detection system of the present invention, described hereinabove with reference to FIG. 9.